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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/820,181 03/14/97 WILHELM

G EN995139

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TM02/0425

EXAMINER

BANANKHAH, M

ART UNIT

PAPER NUMBER

2151

DATE MAILED:

04/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

08/820,181

Applicant(s)

G.W. Wilhelm, Jr.

Examiner

Majid Banankhah

Group Art Unit

2151



☒ Responsive to communication(s) filed on Jan 23, 2001

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-8 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-8 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

MAJID A. BANANKHAH  
PRIMARY EXAMINER

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2151

6. Applicant on page 5 of his remarks argue ❖On the other hand, applicant has provided a stationary queue. Such a queue, which includes two counters, insures not only fairness, but also one thread at a time is awakened and given access, so system performance in resource constrained scenarios is maintained. There is no thrashing of a run/wait queue in the kernel❖. In response it is submitted that, first fairness is interpreted as serializing threads, the reference of Davidson teaches of serializing threads in col. 2, lines 49-54. In col. 2, lines 49. Regarding one thread at a time, Davidson teach ❖However, at most one of the baton objects for a given multi threading unsafe resource can own the baton at any given time.

Later on page 5, last paragraph, Applicant argue ❖That is the essence of applicant's invention. And yet applicant does such without a queue, but rather with a stationary queue (which he explains at page 7 lines 14-15 includes a counter pari). Thus applicant's invention achieves queue-like behavior (first come, first-served) but without the use of a real queue❖. In response, it is submitted that there is no teaching of any (FIFO) queue or queue-like behavior without the use of a real queue in the claims or even in the specification. By definition a queue is a data structure. The data structure which causes the thread access to be serialized is taught by Davidson, and to ensure the serializability of thread access, Periwai teaches of mutex

Art Unit: 2151

1. This final office action is in response to paper number 5, Amendment A, which was received January 22 ,2001. Applicant's argument have been fully considered but they are not deemed to be persuasive. Claims 1-8 are presented for examination.

2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior Office action.

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 1-8, are rejected under 35 U.S.C. § 103 as being unpatentable over Davidson et al. (U.S.Pat No. 5,630,136), in

Art Unit: 2151

view of Periwai et al. (U.S.Pat No. 5,644,768).

As per claims 1-8, Davidson et al. teach:

- a multi-tasking operating system (multi tasking operating system, col. 4, lines 66-68, continued on col. 5, lines 1-11) for simultaneous access (concurrently, col. 1, lines 11-21), serially reusable resource (serialized, col. 2, lines 49-54);
- at least one resource (resource, col. 2, lines 49-54);
- plurality of threads (multi-threads, col. 2, lines 49-54);

The reference of Davidson fails to explicitly teach of a queue for allocating access to the resources. Periwai in the same field of endeavor teach of a mutex record an ID for the thread or process which successfully achieve acquisition of the mutex (col. 3, lines 31-44, and col. 8, lines 61-68, continued on col. 9, lines 1-10), for the reason for the program code can acquire and release mutex primitives without concern for deadlock.

Regarding the sleep and wake up in claims 2-3, the reference of Periwai teaches of sleep and awakening in col. 11, lines 25-68.

As for the limitation of counting the cumulative number of threads, Periwai teaches of reference count in col. 11, lines 25-68.

Art Unit: 2151

record.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Applicant amendment with respect to claim 2 necessitated the new ground of rejection. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE The application has been amended as follows: ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose voice telephone number is (703) 308-6903. A voice mail service is also available at this number.

All response sent to U.S. Mail should be mailed to:  
**Commissioner of Patent and Trademarks**  
**Washington, D.C. 20231**

**Hand-delivered responses should be brought to Crystal Park**

Art Unit: 2151

**Two, 2021 Crystal Drive, Arlington. VA, Six Floor (Receptionist).**

All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses to the Examiner.

**All Formal or Official Faxes must be signed and sent to either (703) 308-9051 or (703) 308-9052.** Official faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the office, e.g., Finance Division for fee charging, etc.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Majid Banankhah

April 23, 2001



MAJID A. BANANKHAH  
PRIMARY EXAMINER